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# NEVADA PERSPECTIVE ON DEVELOPMENT OF YUCCA MOUNTAIN AS THE NATION'S HIGH-LEVEL NUCLEAR WASTE REPOSITORY

WISCONSIN LEGISLATIVE COUNCIL  
SPECIAL COMMITTEE ON NUCLEAR POWER

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MADISON, WISCONSIN  
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# NEVADA AGENCY FOR NUCLEAR PROJECTS

- **ESTABLISHED BY THE NEVADA LEGISLATURE, IN 1985**
- **CARRIES OUT THE STATE'S OVERSIGHT RESPONSIBILITIES UNDER THE 1982 NUCLEAR WASTE POLICY ACT**

**SCIENCE AND ENGINEERING**

**TRANSPORTATION**

**SOCIOECONOMICS**

**POLICY AND REGULATIONS**

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# **NUCLEAR WASTE POLICY ACT AMENDMENTS ACT OF 1987**

- **TERMINATED NATIONAL REPOSITORY SITE SCREENING PROCESS**
- **NAMED YUCCA MOUNTAIN AS THE ONLY SITE TO BE STUDIED**
- **DEFERRED CONGRESSIONAL CONSIDERATION OF THE NEED FOR A SECOND REPOSITORY UNTIL 2007- 2010**
- **PROHIBITED MONITORED RETRIEVABLE STORAGE SITE IN NEVADA**
- **PROMPTED NEVADA LEGISLATURE TO ENACT A STATUTE PROHIBITING STORAGE OF HIGH-LEVEL WASTE IN THE STATE**

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# **SECRETARY OF ENERGY RECOMMENDS YUCCA MOUNTAIN SITE - FEBRUARY 14, 2002**

- **GOVERNOR OF NEVADA SUBMITS NOTICE OF DISAPPROVAL TO CONGRESS**
- **CONGRESS OVERRIDES NEVADA AND DESIGNATES SITE IN JULY 2002**
- **DOE SCHEDULE AT SITE RECOMMENDATION::**
  - **LICENSE APPLICATION TO NRC - END OF 2004**
  - **BEGIN REPOSITORY OPERATION - 2010**
- **NOW -**
  - **LICENSE APPLICATION TO NRC - 2008**
  - **BEGIN REPOSITORY OPERATION - 2017**

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# NRC LICENSE HEARING FOR CONSTRUCTION AUTHORIZATION

- *“The Yucca Mountain hearing...could be one of the largest administrative court cases in U.S. history...The digital courtroom system will store and provide electronic access to millions of pages of evidence and thousands of hours of testimony. The hearing, mandated by Congress, is expected to last three to four years.”*

The Washington Post, November 6, 2006

- **THE NRC LICENSING OF THE PRIVATE FUEL STORAGE FACILITY, AT SKULL VALLEY, UTAH, TOOK EIGHT YEARS. THE DECISION IS NOW UNDER CHALLENGE IN FEDERAL COURT.**

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# **VIEWPOINT OF THE STATE OF NEVADA ON THE SUITABILITY OF YUCCA MOUNTAIN AS A REPOSITORY SITE - INCLUDING ANY OBSTACLES TO BUILDING A REPOSITORY THERE (TECHNICAL, FINANCIAL, REGULATORY, AND POLITICAL)**

- **THE SITE IS UNSAFE - IT CAN NOT ISOLATE THE WASTE**
- **THE NUCLEAR WASTE FUND WILL NOT SUPPORT THE COST**
- **THE NRC AND EPA REGULATIONS ARE NOT FINAL**
- **“FIX YUCCA” BILLS ABOUND AND COMPETE**
- **CONSISTENT, STRONG NEVADA OPPOSITION FOR NINETEEN YEARS**

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# THE SITE IS UNSAFE - IT CANNOT ISOLATE WASTE

- **FOLLOW THE WATER - IT DELIVERS RADIONUCLIDES TO THE ENVIRONMENT**
  - **RAIN AND SNOW MELT INFILTRATE THE FRACTURED VOLCANIC ROCK**
  - **WATER CONTACTS AND CORRODES THE METAL WASTE CONTAINERS**
  - **WATER CONTACTS AND DISSOLVES SOLUBLE RADIONUCLIDES**
  - **WATER TRANSPORTS RADIONUCLIDES TO THE WATER TABLE**
  - **GROUNDWATER TRANSPORTS RADIONUCLIDES TO RESIDENTIAL WATER WELLS AND FARM IRRIGATION WELLS**
  - **GROUNDWATER TRANSPORTS RADIONUCLIDES TO PLAYA LAKES AND SPRINGS**

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## **THE METAL WASTE CONTAINERS ONLY DELAY, BUT *DO NOT* PREVENT RELEASE**

- **METAL DRIP SHIELDS DELAY CORROSION OF WASTE CONTAINERS**
- **CONTAINER FAILURE RATE IS THE LARGEST UNCERTAINTY IN THE YUCCA MOUNTAIN REPOSITORY PERFORMANCE ASSESSMENT**
- **DOE ESTIMATES 80,000 YEARS BEFORE MANY FAILURES**
- **MAXIMUM INDIVIDUAL DOSE LEVEL AT 200,000 - 300,000 YEARS**
  - **200 - 250 TIMES EPA SAFE DRINKING WATER STANDARD**
- **IF NO CONTAINERS - MAXIMUM REACHED AT ABOUT 2,500 YEARS**
  - **EPA SAFE DRINKING WATER STANDARD EXCEEDED IN A FEW HUNDRED YEARS**
- **IT IS NOT A MATTER OF “IF”. THE QUESTION IS “WHEN?”**



# THE NUCLEAR WASTE FUND WILL NOT SUPPORT THE COST

- **IN 2001, DOE ESTIMATED THE TOTAL SYSTEM LIFE CYCLE COST AT ABOUT \$58 BILLION FOR THE STATUTORY 70,000 MTU LIMIT REPOSITORY - OTHER ESTIMATES APPROACH \$100 BILLION**
- **BY 2011 COMMERCIAL SPENT FUEL GENERATION WILL HAVE REACHED ITS ALLOCATED REPOSITORY CAPACITY OF 63,000 MTU (7,000 MTU RESERVED FOR FEDERAL WASTE)**
- **AS OF JUNE 2006 PAYMENTS TO THE WASTE FUND, PLUS INTEREST AMOUNTED TO \$25.4 BILLION, OF WHICH \$6 BILLION HAS BEEN SPENT. AN ADDITIONAL \$3 BILLION HAS BEEN SPENT FROM THE GENERAL FUND**
- **THE REAL SPENDING HAS YET TO BEGIN. FOR EXAMPLE:  
  
UNDERGROUND AND SURFACE CONSTRUCTION; 11,000 TO 17,000 DISPOSAL, STORAGE, AND TRANSPORT CONTAINERS; 250-320 MILES OF NEW RAIL LINE; \$4 - \$6 BILLION (2006 DOLLARS) FOR TITANIUM DRIP SHIELDS AFTER 50 -100 YEARS**

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# THE NRC AND EPA REGULATIONS ARE NOT FINAL

- **IN THE YEAR PRIOR TO THE 2002 SITE RECOMMENDATION, ALL APPLICABLE SITING, LICENSING, AND RADIATION PROTECTION RULES WERE MADE SITE SPECIFIC TO YUCCA MOUNTAIN AND DOE'S SITE DISQUALIFICATION CRITERIA WERE ELIMINATED**
- **THE EPA YUCCA MOUNTAIN STANDARD WAS CHALLENGED BY NEVADA AND OTHERS IN THE DC CIRCUIT COURT OF APPEALS**
- **THE COURT, IN 2004, STRUCK DOWN THE 10,000 YEAR COMPLIANCE PERIOD AS IT WAS NOT CONSISTENT, AS MANDATED BY CONGRESS, WITH THE FINDINGS AND RECOMMENDATIONS OF A NATIONAL ACADEMY OF SCIENCES (NAS) REPORT ON THE TECHNICAL BASES FOR A YUCCA MOUNTAIN STANDARD**
- **THE NAS REPORT SPECIFICALLY REJECTED THE 10,000 YEAR COMPLIANCE PERIOD AS HAVING NO SCIENTIFIC BASIS, AND SAID THE COMPLIANCE PERIOD SHOULD INCLUDE THE TIME OF MAXIMUM RISK, OUT TO 1 MILLION YEARS**

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# **IN 2005 EPA PROPOSED A NEW STANDARD THAT RETAINED THE ORIGINAL STANDARD UP TO 10,000 YEARS**

- **BUT, AFTER 10,000 YEARS:**
  - **THE SAFE DRINKING WATER ACT GROUNDWATER PROTECTION STANDARDS ARE REMOVED**
  - **EPA ALLOWS A MAXIMUM DOSE 70 TIMES GREATER THAN THE DOSE LIMIT FOR THE EARLIER PERIOD**
  - **VIOLATES THE INTERNATIONALLY ACCEPTED PRINCIPLE OF APPORTIONMENT OF DOSE FROM THE URANIUM FUEL CYCLE**
- **EPA EXPECTS TO ISSUE ITS FINAL RULE BY THE END OF THIS YEAR**
  - **IF IT RESEMBLES THE PROPOSED RULE, NEVADA WILL CHALLENGE IT AGAIN**

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# **“FIX YUCCA” BILLS ABOUND AND COMPETE**

- **VARIOUS DRY WASTE STORAGE STRATEGIES:**
  - **AT-REACTOR; AT DESIGNATED (FEDERAL) STATE OR REGIONAL SITES; AT FEDERAL INSTALLATIONS; AT YUCCA MOUNTAIN**
  - **ENERGY AND WATER DEVELOPMENT APPROPRIATIONS (H.R. 5427 SEC. 313) PENDING IN SENATE**
    - **ENERGY SECRETARY, IN CONSULTATION WITH GOVERNOR OF EACH STATE WITH A REACTOR, DESIGNATES A STATE STORAGE SITE, IF FEASIBLE, OR A REGIONAL SITE, TO BE FEDERALLY OWNED**
    - **DOE RESPONSIBLE FOR SPENT FUEL AT CLOSED REACTORS, IF ASKED**
    - **AFFIRMS NRC WASTE CONFIDENCE**

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# **THE “COWCATCHER” BILLS –ELIMINATE POTENTIAL OBSTACLES (S.2589)(H.R.5360) ADMINISTRATION BILLS – A MUST FOR 2017**

- **REMOVE 70,000 MTU CAP**
- **TAKE WASTE FUND OFF-BUDGET**
- **REDUCE SCOPE OF ENVIRONMENTAL REVIEWS**
- **EXEMPT WASTE FROM RCRA**
- **PREEMPT STATE AND LOCAL TRANSPORTATION REQUIREMENTS**
- **PREEMPT NEVADA AIR QUALITY REGULATIONS**
- **PREEMPT NEVADA GROUNDWATER APPROPRIATION AUTHORITY**
- **AFFIRM NRC WASTE CONFIDENCE**

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# THE BOTTOM LINE

- **REGULATORY REVISIONS CAN NOT IMPROVE AN UNSAFE SITE**
- **PRICE IS AN OBJECT**
- **BORN IN POLITICS...**